



TELTONIKA

3G Mobile Router (RUT100)

User Manual v1.05

LEGAL NOICE

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ATTENTION



All wireless devices for data transferring are susceptible to interference, which could affect performance



Before using the device we strongly recommend read this user manual.



The device is not water-resistant. Keep it dry.

IMPORTANT NOTES!

It is mandatory to read the notes and manual carefully before starting to use the device.

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1 FOR YOUR SAFETY

In this document you will be introduced how to use 3G mobile router safely. We suggest you to adhere to following recommendations to avoid any damage to person or property.

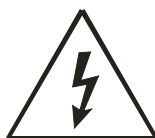
You have to be familiar with the safety requirements before starting to use the device!

3G Mobile Router is used to provide a mobile Internet access using a GSM network. To avoid user injuries it is important to follow safety requirements listed below.



Installation and technical support of the device can be performed only by a service personnel or a person who has enough knowledge about this device and safety requirements.

When the device is not working or working bad the technical service of device can perform only qualified personnel. We strongly recommend to hand the device to repairer or manufacturer.



Do not mount or serve device during a thunderbolt.

To avoid mechanical damage of the device, it is recommended to transport the device packed in damage-proof pack.

Signal level of the device depends on the environment in which it is working.

The power of connected device should satisfy power of release device.

2 PRODUCT OVERVIEW

2.1 Introduction

Teltonika 3G Mobile Router provides WAN connectivity to wired and wireless clients using the 3G cellular data network. It allows multiple users to get a IEEE 802.11 compliant connection within your wireless broadband network with a single 3G data access account and card. 3G Mobile Router is extremely useful for mobile work teams or emergency crews that need access to the broadband Internet but have no permanent base. The 3G/IEEE 802.11 router might be an easy solution to provide Internet connection for commuter vehicles, such as trains or company buses. Quickly set up a IEEE 802.11 hotspot Internet connection to check email and browse the web or share file.

2.2 Package contents

- 3G mobile router (RUT100)
- 2 external Wireless LAN antennas
- External GSM antenna
- Power adapter
- CAT5 LAN cable
- CD with User Manual
- Leaflet “Quick Start Guide”

Note: The manufacturer does not supply the SIM card, which is mandatory for setting up a connection to the GSM network! The SIM card may be purchased from your GSM (mobile) service provider!

Note: Using a power supply with a different voltage rating than the one included with the RUT100 will cause damage and void the warranty for this product.

Note: If any of the components is missing or damaged, please contact the retailer or reseller from which this product was purchased.

2.3 System requirements

A computer with Windows®, Macintosh®, or Linux-based operating systems with a network connection (wired or wireless).

A web browser Internet Explorer 6.0, Netscape Navigator™ 6.0, Opera 9.0 or Mozilla 5.0 for configuration.

Note: The screenshots in this manual were taken with Internet Explorer 7.0.

2.4 Hardware. LED's and connections

2.4.1 Back panel



Figure 1. Router back panel view.

1. Wireless LAN antenna connection.
2. GSM antenna connection.
3. Wireless LAN antenna connection.

2.4.2 Front panel



Figure 2. Router front panel view.

1. 3G LED. A solid light indicates proper connection of the 3G.
2. Reset button.
3. Ethernet socket.
4. Ethernet LED. A solid light indicates proper connection of the Ethernet. A blinking light indicates data transfer.
5. Power LED. A solid light indicates a proper connection to the power supply.
6. SIM card socket.
7. Power Adapter socket.

3 GETTING STARTED

3.1 Initial setup

3G Mobile Router enables to access network using a wireless connection from virtually anywhere within the operating range of wireless network. Before finding place to set up access point, some things should be considered:

1. Make sure the power outlet is nearby as the router requires power supply.
2. Keep the access point as central in work area as possible.
3. The number of walls and ceilings between the router and other network devices should be kept to a minimum as each wall or ceiling probably will reduce adapter's range from 1-30 meters. Signal strength and speed fall off with distance.
4. Higher is often better. Set up the router on the top shelf of a bookcase rather than the bottom one, if it is possible. The antenna usually works best if oriented to point straight up.
5. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access point and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, mirrors, file cabinets, bricks, and concrete will degrade wireless signal.
6. Keep router away (at least 1-2 meters) from electrical devices or appliances that generate RF noise.
7. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

3.2 Connect to network

1. Attach Wireless LAN and GSM antennas.
 - Remove the antenna from its plastic wrapper.
 - Screw the antenna in a clockwise direction to the back panel of the unit.
 - Position the antenna upward at its connecting joint. This will ensure optimal reception.
2. Insert the SIM card which was given by your GSM (mobile) service provider
3. Insert the Ethernet cable into LAN Port if the router will be configured using wired connection.
4. Connect the power adapter to the receptor on the front panel of 3G Mobile Router. Then plug the other end of the power adapter into a wall outlet or power strip.

Note: SIM card is mandatory for setting up connection to the GSM network. However, the manufacturer of this equipment does not supply the SIM card. The SIM card can be purchased from your GSM (mobile) service provider! For APN, user name and password please contact your GSM (mobile) service provider. The 3G Mobile Router must be powered off while inserting or taking out the SIM card. If the SIM card will be inserted or taken out from the modem while the power is on – it may cause damage to the modem or the SIM card. In this case, the modem will not be replaced or repaired by the guarantee.

4 ROUTER CONFIGURATION

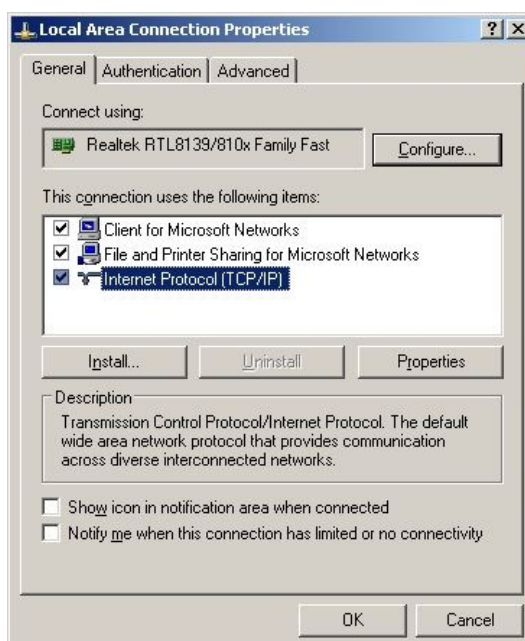
4.1 Connect to router WEB configuration tool using LAN connection

Step 1 Connect device to the same LAN as Administrator computer.

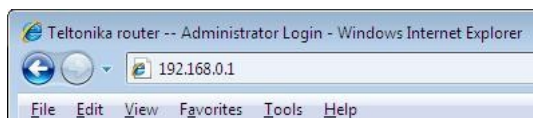
Step 2 Setup Local Area Network adapter on your computer (Go to **Start > Settings > Network Connections** Right click on **Local Network Connection** by selecting **Properties**):



Step 3 Setup the Local Area network adapter's IP address (choose **Internet Protocol (TCP/IP)** and click **Properties**):



Step 4 Setup the Local area network adapter to **Obtain an IP address automatically** or assign static IP address manually within 192.168.0.2 - 192.168.0.254 address range with mask 255.255.255.0, gateway 192.168.0.1 and DNS server 192.168.0.1. Open the Web browser and type the default IP address of the router (192.168.0.1):



Step 5 Enter the 3G Mobile Router administrator login details to access the Web management tool:



The default administrator login settings are:

Login: **admin**

Password: **admin01**

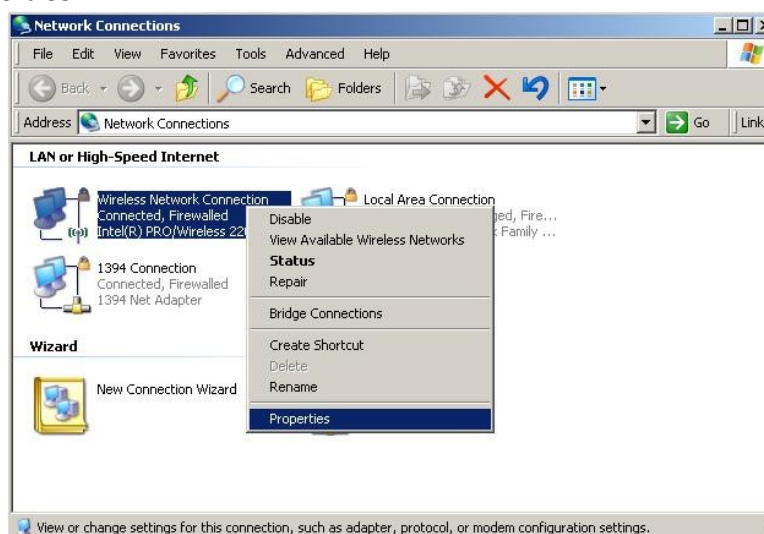
Note: It is strongly recommended to change the password after the first router configuration.

4.2 Connect to router WEB configuration tool using wireless LAN connection

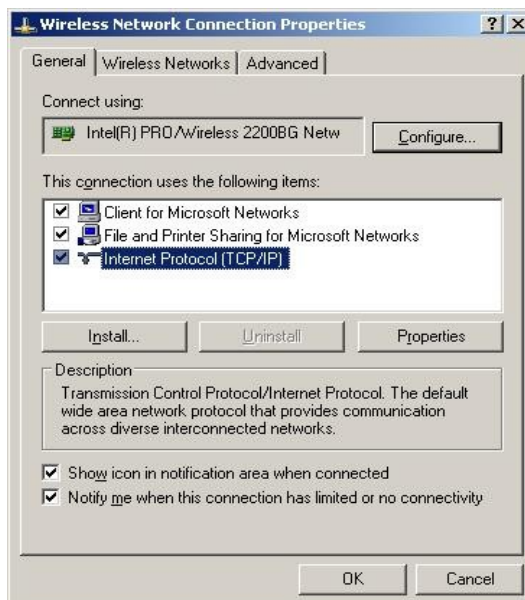
Note: the Wireless network function is shipped disabled by default and the configuration for the first time can be made only using wired connection.

Step 1 Connect the power adapter to the device.

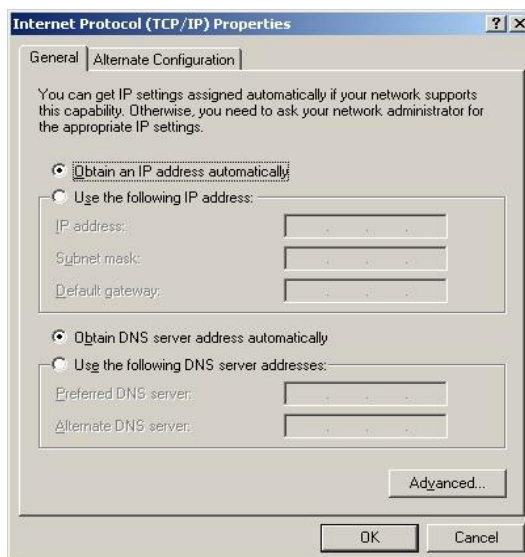
Step 2 Setup wireless network adapter on your computer (Go to **Start>Settings>Network Connections>**Right click on **Wireless Network Connection** associated with the wireless adapter) by selecting **Properties**:



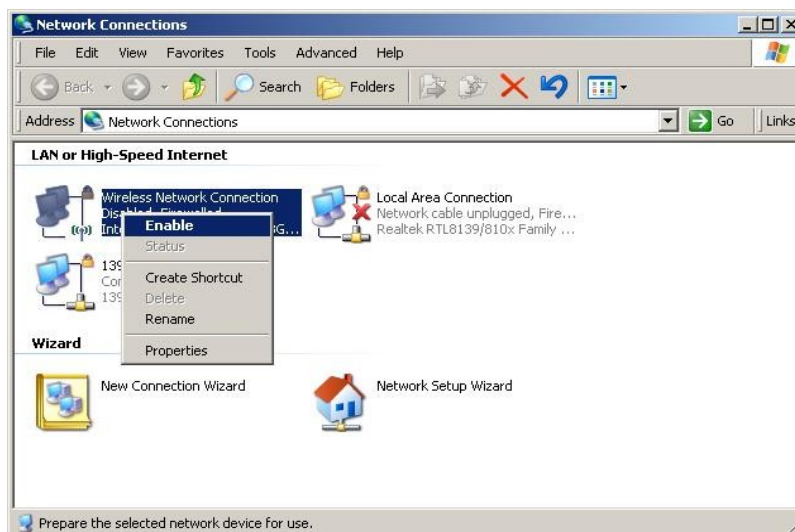
Step 3 Setup the wireless network adapter's IP address (choose **Internet Protocol (TCP/IP)** and click **Properties**):



Step 4 Setup the wireless network adapter to **Obtain an IP address automatically** or assign the wireless client static IP address manually within 192.168.0.2 - 192.168.0.254 address range with mask 255.255.255.0, gateway 192.168.0.1 and DNS server 192.168.0.1.

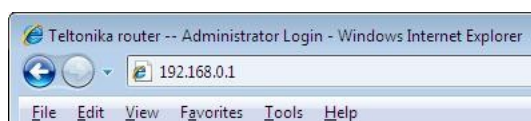


Step 5 Enable the wireless network connection:



Step 6 Choose the wireless device with default SSID `www.teltonika.lt` from the list of available wireless network:

Step 7 Open the Web browser and type the 3G Mobile Router device default IP address of wireless interface `192.168.0.1`.



Step 8 Enter the 3G Mobile Router administrator login details to access the Web management:



The default administrator login settings are:

Login: **admin**

Password: **admin01**

Note: It is strongly recommended to change the password after the first router configuration.

Step 9 After successful administrator log on you will see the main page of the 3G Mobile Router Web configuration interface. The device now is ready for configuration.

4.3 WEB configuration interface structure

The main Web management menu is displayed after successful login into the system (see the figure below). From this menu all essential configuration pages are accessed.

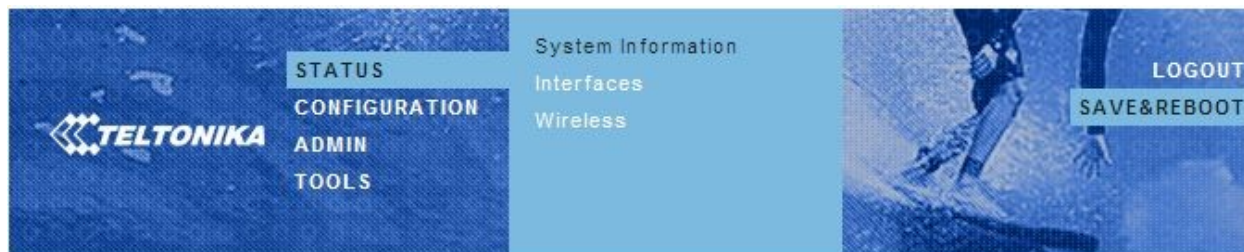


Figure 3. Main Management Menu

By default the **Statistics | System Information** menu is activated and the main system information is displayed. The active menu is displayed in a different color. The web management menu has the following structure:

Status

System Information – displays general information of the device.

Interfaces – displays main network statistics of the device.

Wireless – displays statistics of the wireless interfaces of the device.

Configuration

3G Network – 3G network settings.

Network – Ethernet network settings.

Wireless – IEEE 802.11 network settings.

Port forwarding – Port forwarding settings.

Services – SSH, HTTPS services management.

Admin

Account – change administrator's password.

Maintenance – new firmware upgrade, reboot or reset to factory defaults the device.

Tools

Site Survey – shows information about wireless networks in the local geography.

4.4 Status

Use the **Status** menu to check the device current status (this is the default page when accessing the administration web management interface). There are five sections of the status information:

- System Information
- Interfaces
- Wireless

4.4.1 System Information

System Information menu displays general devices status (device name, firmware version, hardware revision, uptime, system memory, average load), license status and short information about current skin.

System Information

Uptime	00:00:28
Device name	RUT100
Firmware version	v1.02
Average system load	1min: 0.36 5min: 0.09 15min: 0.03
System memory	Total: 30168 kB Free: 11940 kB

Figure 4. System Information

Uptime – displays the time since the system was last rebooted.

Device name – displays the device type.

Firmware version – displays current version of the firmware.

Average system load – displays the average load of the device processor in the period of the last 1minute, 5 minutes and 15 minutes (a larger value means a larger average load on the processor).

- <1.0 – System is idle
- =1.0 – Normal load
- >1.0 – Processor is busy.

System memory – displays total and free system memory [kB].

Refresh – click to renew system information page.

4.4.2 Interfaces

The **Interfaces** page displays the main network configuration and receive/transmit statistics of all interfaces.

Network Statistics

Interface	Receive statistics				Transmit statistics			
	bytes	packets	errors	drops	bytes	packets	errors	drops
LAN	24257	168	0	0	24257	147	0	0
WLAN	0	0	0	0	0	62	0	4
Bridge	21386	166	0	0	21386	149	0	0
WAN	16	1	0	0	16	9	0	0

Network Configuration

Interface	MAC address	IP address	Netmask	Broadcast
Bridge	00:02:6F:4B:E6:49	192.168.0.1	255.255.255.0	192.168.0.255

Figure 5. Interfaces

Network statistics – displays detailed receive and transmit statistics of each interface.

Network configuration – displays the main parameters of the interfaces (MAC address, IP address, Subnet mask).

Refresh – click to renew network statistics information.

4.4.3 Wireless

The Wireless page displays the main statistics of wireless LAN interface.

Wireless Statistics

Interface	Parent	Status	Link	Level	Noise	Invalid network ID	Decryption errors	Invalid fragments	Retry count	Miscellaneous errors	Missed beacons
WLAN	WLAN	up	0	160	160	0	0	0	0	0	0

Wireless Configuration

Country	Lithuania										
Interface	Parent	MAC address				IEEE mode		Channel	ESSID		
WLAN	WLAN	00:0B:6B:80:D3:EA				G		6	www.teltonika.lt		

Figure 6. Wireless LAN Statistics

Wireless Statistics – displays detailed statistics of each wireless interface.

Wireless Configuration – displays the main information of the device radio.

Refresh – click to renew wireless statistics information.

4.5 Configuration

Use the **Configuration** menu to manage device configuration:

- **3G Network** – to setup 3G network settings.
- **Network** – to setup main Ethernet network settings.
- **Wireless** – to setup Wireless LAN network settings.
- **Port forwarding** – to setup port forwarding settings.
- **Services** – to setup SSH, HTTP services.

4.5.1 3G Network

To get all the configuration data please contact your GSM (mobile) service provider.

Connection parameters

Phone Number	<input type="text" value="*99#"/>
APN	<input type="text"/>
User Name	<input type="text"/>
Password	<input type="password"/>

Figure 7. 3G Network configuration.

Phone Number: Phone number acquired from your service provider.

APN: Access Point Name (APN).

User Name: Enter your User Name for your 3G connection.

Password: Enter your Password for your 3G connection.

Apply – click to save 3G Network information.

4.5.2 Network

This section will allow you to change the local network settings of the router and to configure the DHCP settings

Network Settings

Router IP address	<input type="text" value="192.168.99.3"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Enable DHCP server	<input type="checkbox"/>

Figure 8. Network settings.

Router IP address. The IP address of the router. The default IP address is 192.168.0.1.

Subnet mask. The Subnet Mask of the router. The default subnet mask is 255.255.255.0.

Enable DHCP server. Check the box to enable the DHCP server on your router. Uncheck to disable this function

When DHCP server function is enabled the following screen appears:

Network Settings

Router IP address	<input type="text" value="192.168.99.3"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Enable DHCP server	<input checked="" type="checkbox"/>
IP address from	<input type="text" value="192.168.4.2"/>
IP address to	<input type="text" value="192.168.4.254"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Lease time	<input type="text" value="300"/>
WINS address	<input type="text"/>
Domain	<input type="text"/>

Figure 9. Network settings.

IP address from. Starting IP addresses for the DHCP server's IP assignment.

IP address to. Ending IP addresses for the DHCP server's IP assignment.

Subnet mask. The Subnet Mask of the router. The default subnet mask is 255.255.255.0.

Lease time. Determines how long IP addresses are assigned for you. During the lease time, the DHCP server cannot assign that IP address to any other clients. The purpose of a lease is to limit the length of time that a client may use an IP address. A lease prevents unused clients from taking up IP addresses when there are more clients than addresses. Enter the Lease time in seconds.

WINS address. If WINS (Windows Internet Naming Service) server is specified, the router at system startup, will register its name and IP address with the WINS server. WINS server is used for mapping host names to network addresses. This results in fast and efficient host name resolution. Specify WINS server IP address.

Domain. Enter the domain name for the Router. Some ISPs require it for identification. Check your ISP to see if your broadband Internet service has been configured with a domain name. In most cases, leaving these fields blank will work.

4.5.3 Wireless

This section will allow you manage wireless network settings.

Country Code

Country code

Figure 10. Wireless network settings.

Country code. Select the country where the wireless network will be created.

Wireless Settings

Enable radio ☒
SSID

Figure 11. Wireless network settings.

Enable radio. Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions

SSID. Specify a unique name for your wireless network.

Advanced Settings

IEEE mode	<input type="text" value="B/G Mixed"/>
Dynamic turbo	<input type="checkbox"/>
Current channel	<input type="text" value="6"/>
Channel	<input type="text" value="6"/> <input type="text" value="Full"/>
Data rate, Mbps	<input type="text" value="6"/>
Transmit power (dBm)	<input type="text" value="60%"/>
Note: 100% transmit power is equal to 20dBm.	
ACK timeout	<input type="text" value="20"/>
Fragmentation	<input type="text" value="off"/>
RTS	<input type="text" value="off"/>
Enable VLAN	<input type="checkbox"/>
Throughput enhancements	<input type="checkbox"/> Fast Frames <input type="checkbox"/> Packet Bursting <input type="checkbox"/> Compression
Quality of service (WMM)	<input type="checkbox"/>
User isolation	<input type="checkbox"/>
Inter AP client isolation	<input type="checkbox"/>

Figure 12. Wireless network settings.

IEEE mode. Specify the wireless network mode [B,G, mixed B/G].

Dynamic turbo. The dynamic function allows the router to automatically search for channels with less noise and interference. By default, this feature is disabled. You can enable this feature by selecting the checkbox. (For G mode only.)

Current Channel. Indicates the channel setting for the router.

Channel. Select the channel for the wireless network.

Data rate. Set the maximum wireless network data rate.

Transmit power. Set the maximum transmitter radiation power.

ACK timeout. Set ACK timeout in order to adjust the timeout value for long distance operation.

Fragmentation. specify the fragmentation threshold (in bytes), which determines whether data frames will be fragmented and at what size [256-2346/off/auto]. On a 802.11 wireless LAN, frames exceeding the fragmentation threshold will be fragmented, i.e., split into smaller units suitable for the circuit size. Data frames smaller than the specified fragmentation threshold value are not fragmented. Default: off.

Note: Setting a lower fragmentation threshold value can help improve connection reliability in noisy environments (where radio interference is present). This mechanism does add overhead and therefore reduces effective throughput.

RTS. specify the maximum packet size beyond which the wireless LAN card invokes it's RTS/CTS mechanism [0-2347/off/auto]. Packets that exceed the specified RTS threshold trigger the RTS/CTS mechanism. The card transmits packets smaller than this threshold without using RTS/CTS. Default: off.

Note: Setting a lower RTS threshold value can improve connection reliability and throughput in crowded wireless LAN environments (where many clients are trying to communicate simultaneously). It adds a certain amount of overhead, but can compensate for this by reducing bandwidth lost due to collisions.

Enable VLAN. Enable Virtual Local Area Networks (VLAN) function.

Throughput enhancements (available only on G mode).

Fast Frames – packet aggregation and timing modifications.

Packet Bursting – more data frames per given time period.

Compression – standards based (Lempel Ziv) real-time hardware compression.

Quality of service (WMM). Check box to enable applications such as audio, video and voice applications have higher priority than less-sensitive data applications.

User isolation. Check the box to isolate the wireless clients from communicating with each other.

Inter AP client isolation. Check the box to enable internal wireless network users isolation.

Authentication method



Broadcast SSID ☒

Authentication method Open system ▼

Figure 13. Wireless network authentication settings.

Broadcast SSID. Check the box to enable SSID broadcast.

Authentication Method. Choose the authentication method for wireless network.

Open system – no encryption.

WPA-PSK-AES – choose the WPA security with passphrase

Passphrase – specify the passphrase [8-63 characters].

WPA-PSK-TKIP – choose the WPA security with passphrase, encrypted by the TKIP (Temporal Key Integrity Protocol) algorithm.

Passphrase – specify the passphrase [8-63 characters].

WPA2-PSK-AES – choose the WPA2 security with passphrase, encrypted by the AES algorithm.

Passphrase – specify the passphrase [8-63 characters].

WPA2-PSK-TKIP – choose the WPA2 security with passphrase, encrypted by the TKIP (Temporal Key Integrity Protocol) algorithm.

Passphrase – specify the passphrase [8-63 characters].

4.5.4 Port forwarding

This section will let you manage port forwarding.

Port forwarding

Application name	<input type="text"/>	(Example: eMule, uTorrent, etc.)
Port type	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	
Incoming port	<input type="text"/>	(Format x for single, x:x for range)
Destination address	<input type="text"/>	(Format x.x.x.x or x.x.x.x:x)
<input type="button" value="Save"/> <input type="button" value="Clear"/>		

Figure 14. Port forwarding settings.

Application name. Set the name of the application.

Port type. Select TCP, UDP, or BOTH

Incoming port. Set incoming port value or range

Destination address Enter the IP address and/or port of the computer on your local network that you want to allow the incoming service to be forwarded.

Example 1: Forward TCP port 40000 to IP address 192.168.0.100

Port forwarding

Application name	<input type="text" value="Application 1"/>	(Example: eMule, uTorrent, etc.)
Port type	<input checked="" type="radio"/> TCP <input type="radio"/> UDP <input type="radio"/> BOTH	
Incoming port	<input type="text" value="40000"/>	(Format x for single, x:x for range)
Destination address	<input type="text" value="192.168.0.100"/>	(Format x.x.x.x or x.x.x.x:x)
<input type="button" value="Save"/> <input type="button" value="Clear"/>		

Example 2: Forward UDP port 40000 to IP address 192.168.0.100 port 50000.

Port forwarding

Application name	<input type="text" value="Application 1"/>	(Example: eMule, uTorrent, etc.)
Port type	<input type="radio"/> TCP <input checked="" type="radio"/> UDP <input type="radio"/> BOTH	
Incoming port	<input type="text" value="40000"/>	(Format x for single, x:x for range)
Destination address	<input type="text" value="192.168.0.100:50000"/>	(Format x.x.x.x or x.x.x.x:x)
<input type="button" value="Save"/> <input type="button" value="Clear"/>		

Example 3: Forward TCP and UDP ports range 40000 - 70000 to IP address 192.168.0.100 port 50000.

Port forwarding

Application name	<input type="text" value="Application 1"/>	(Example: eMule, uTorrent, etc.)
Port type	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	
Incoming port	<input type="text" value="40000:70000"/>	(Format x for single, x:x for range)
Destination address	<input type="text" value="192.168.0.100:50000"/>	(Format x.x.x.x or x.x.x.x:x)
<input type="button" value="Save"/> <input type="button" value="Clear"/>		

4.5.5 Service

In this section is possible to enable/disable HTTP, SSH services which are important for remote control management.

SSH

Enable SSH	<input checked="" type="checkbox"/>
Port	<input type="text" value="22"/>

Figure 15. SSH service

Enable SSH. Check the box to enable SSH service.

Port. Set port value of the SSH service.

HTTP

Enable management through HTTP ☒

Note: HTTPS is always enabled.

Figure 16. HTTP service

Enable management through HTTP. Check the box to enable management through HTTP.

4.6 Admin

Use the **Admin** menu to define access settings to the device, or to use the following system utilities:

- **Account** – change administrator's password.
- **Maintenance** – new firmware upgrade, reboot or reset to factory defaults the device.

4.6.1 Account

The Administrative Account menu is for changing the existing administrators' password.

Administrative Account

Username	admin
Old password	<input type="password"/>
New password	<input type="password"/>
Verify password	<input type="password"/>

Figure 17. Change administrator password

Username – displays the username of the current connected administrator. This parameter is not changeable.

Old password – enter the old administrator password.

New password – enter the new administrator password for user authentication.

Verify password – re-enter the new password to verify its accuracy.

Apply – click to save new administrator settings.

Note: The only way to gain access to the web management if you forget the administrator password is to reset the device factory default settings.

Note: Default administrator login settings are:

User Name: **admin**

Password: **admin01**

4.6.2 Maintenance

Use the **Maintenance** menu to upgrade system firmware, reboot the device or set the device to factory default values.

To update your device firmware use the **Firmware** upgrade section, select the firmware file and click the Upload button:

Firmware Upgrade

Firmware image:

Figure 18. Firmware update

Current Firmware Version – displays version of the current firmware.

Browse... – click the button to select the new image from a folder on the PC.

Upload – upload the new firmware.

The new firmware image is uploaded to the controller's temporary memory. It is necessary to save the firmware into the controller's permanent memory. Click the **Upgrade** button.

Use the **Reboot** section to reboot the device:

Reboot

Reboot device

Figure 19 . Reboot Device

Reboot. Reboot device with the last saved configuration.

After clicking the **Reboot** button, the confirmation message appears:

Reboot

Are you sure you want to reboot the device?

Figure 20. Reboot Confirmation

Reboot. Click to finish the device reboot process.

Cancel. Do not reboot the device.

Use the **Factory Defaults** menu to reset device parameters into factory defaults:

Factory Defaults

Reset device to factory defaults

Figure 21. Resetting Device to Factory Defaults

Reset – click to reset the device to factory default values.

After clicking the Reset button, the confirmation message appears:

Factory Defaults

Are you sure you want to reset the device to factory defaults?
By resetting the device to defaults all current configuration will be lost.

Reset Cancel

Figure 22. Reset to Factory Defaults Confirmation

Reset. Click to reset the device to factory default values.

Cancel. Click to cancel reset process.

Note: Resetting the device is an irreversible process. Current configuration and the administrator password will be set back to the factory default.

If there are any problems with router the troubleshoot file may be downloaded. It contains router configuration information, messages and troubleshoot data.

Troubleshooting

Download troubleshooting file

Download

Figure 23. Troubleshoot file download

4.7 Tools

Use the **Tools** menu to use the following device applications:

- **Site Survey** – to view the list of wireless networks in local graphical area.

4.7.1 Site Survey

The Site Survey test shows overview information for wireless networks in a local geographic area. Using this test, an administrator can scan for working access points, check their operating channels, encryption and see signal/noise levels. An administrator can use this feature to identify a clear channel to set the device.

Note: Note that Site Survey function can take several minutes to perform.

A Site Survey test is performed every time on the startup of the device, therefore the results of the last performed Site Survey test and its time can be found on the page. Thus, to obtain the results, the initiation of the scan is not necessary. To perform the Site Survey test currently, click the **Scan** button:

Site Survey

MAC address ▲	ESSID	Encryption	Signal strength	Noise floor	Frequency, GHz	Channel
No scan results.						

Note: initiating **Scan** will temporary disable radio link(s).

Scan

Figure 24. Site Survey Table

Note: The Site Survey function is impossible if the selected wireless interface is disabled.

5 TECHNICAL SPECIFICATION

Wireless IEEE 802.11 network

Standards

IEEE 802.11b: 11Mbps, 5.5Mbps, 2Mbps, 1Mbps

IEEE 802.11g: 54Mbps, 48Mbps, 36Mbps, 24Mbps, 18Mbps, 12Mbps, 9Mbps, 6Mbps, automatically fall back to 5.5Mbps, 2Mbps, 1Mbps

Transmitter output power at antenna connector

IEEE 802.11b:	1-11Mbps	20dBm
IEEE 802.11g:	6-24Mbps	20dBm
	36Mbps	19dBm
	48Mbps	17dBm
	54Mbps	16dBm

Receiver sensitivity at antenna connector

IEEE 802.11b: -92 dBm @ 1Mbps

-87 dBm @ 11Mbps

IEEE 802.11g: -90 dBm @ 6Mbps

-70 dBm @ 54Mbps

Security

WPA/WPA2

Wireless Frequency Range

2.412GHz to 2.484GHz

External Antenna Type

Single detachable reverse SMA

Management

User-friendly Web GUI

Wired and wireless network status.

Site survey test.

Traffic monitoring.

Firmware upgradeable.

HSDPA/UMTS 850/1900/2100 MHz

Power Class 3 (+24dBm)

HSDPA 7.2: categories 1-4, 11 and 12

HSDPA 3.6: categories 5 and 6

HSDPA 7.2: category 7 and 8

UMTS: 384 kbps operation in downlink and uplink

EDGE 850/900/1800/1900 MHz

GSM Power Class 4 (2W) for 850/900 bands

GSM Power Class 1 (1W) for 1800/1900 bands

EDGE class E2 (+27 dBm in 850/900 bands, +26 dBm in 1800/1900 bands)

GPRS/EGPRS Multislot Class 12 (4 slots Rx, 4 slots Tx)

GPRS/EGPRS Class B Type 1 MT

GPRS CS1-CS4; EGPRS MCS1-MCS9

CSD: 14.4 and 9.6 kbps

Temperature & Humidity

Operation 0° to 40° C

Maximum humidity 80%

Transit/Storage 0° to 40° C maximum humidity 80% (no condensation)

LEDS

Power

Cellular Network Activity

Wireless LAN Activity

LAN Activity

Host Operating System

Microsoft Windows® 98SE/ME/NT4.0/2000/XP, Unix, Linux and MacOS

Dimensions

L = 100mm

W = 85mm

H = 36mm

Weight

280g

6 TECHNICAL SUPPORT CONTACTS

If you face any problems related to the device, which you are not able to solve by yourself, you are always welcome to address our technical support department by e-mail support@teltonika.lt. We will be very glad to help you.